

MONTHLY JOURNAL OF  
THE MUSHROOM GROWERS'  
ASSOCIATION

# MGA

## BULLETIN

FEBRUARY, 1956

NUMBER 74

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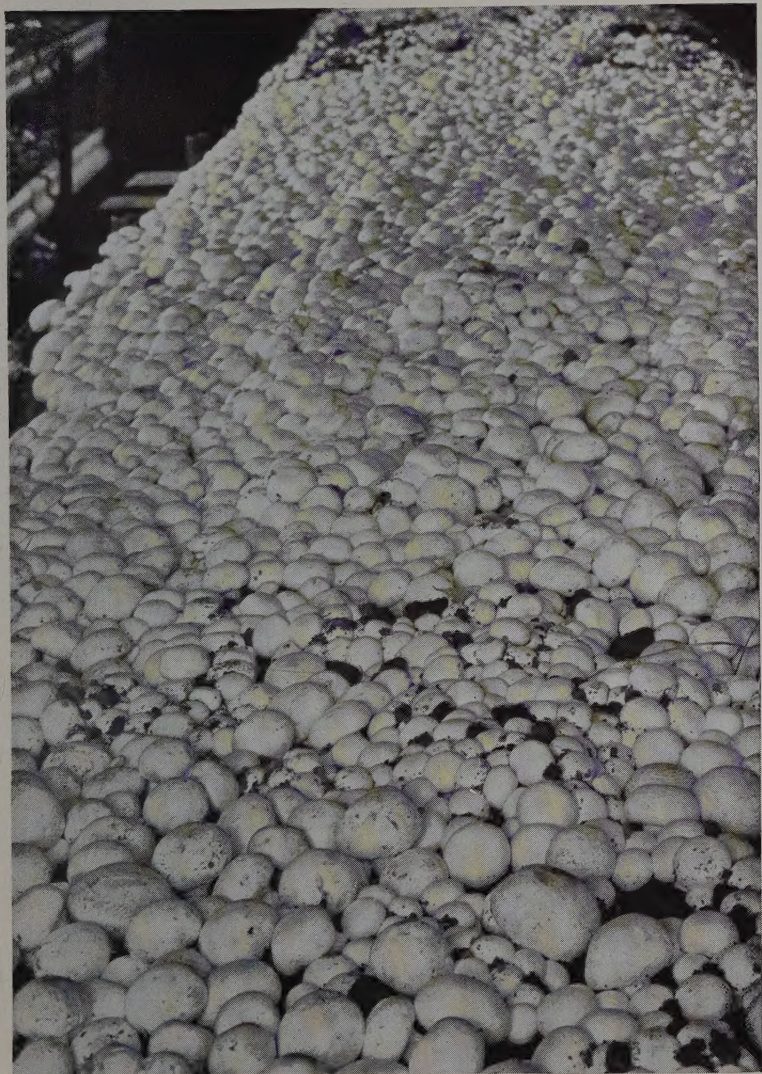


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# The **MGA** BULLETIN

FEBRUARY, 1956

NUMBER 74

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## EDITORIAL

During the past 12 months our Spawn Distributors have given their support to collecting the publicity contributions but as it was not on a standard basis we had to rely on the enthusiasm of each individual distributor to produce the results, which, on the whole have been erratic.

Within twenty days of posting the details of the revised scheme, 74% affirmative replies were received, and only two negative ones. If the ratio of the remaining replies is similar the vast majority of our members will be contributing, and the final figures may constitute an all time record for a voluntary scheme in the Horticultural Industry or any other industry for that matter.

Mushroom spawn can be used for no other purpose than mushroom growing. Mushrooms are grown to be consumed. Therefore the consumption of mushrooms is the governing factor; it is useless growing them unless there is a demand. It is even more useless manufacturing spawn unless the mushrooms it would produce are wanted.

It must be gratifying to the Spawn Distributors to find the mushroom growers of the British Isles united when it comes to doing their utmost to encourage the consumption of mushrooms by publicity; it means it is worth their while producing their spawn.

The word "gratifying" is quite inadequate when expressing the feelings of your Executive and Publicity Committees. The solid backing we have received from the members agreeing to pay regularly the Spawn Contribution assures the success of the Publicity Scheme.

Owing to the support the growers have given to the scheme, we are quite certain that the financial help we have had during the past year from our Trade and Wholesale friends will not only be maintained but increased by them and more will give their support.

"If the growers do their part, we will do ours" has been heard on so many occasions. The growers *have* done theirs and on behalf of the Mushroom Industry we sincerely thank them.

"The MGA said he could,  
the Grower said he would,  
the Spawn Distributor said the grower wouldn't,  
... but he did."

*With apologies to the Smithfield Meat Market Organiser of The Transport and General Workers Union and the Spawn Distributors.*

G. W. BAKER, (MGA Chairman).

Fred. C. Atkins tries to simplify . . . . .

## THE DIAGNOSIS OF MUMMY

The cultivated mushroom, *Psalliota hortensis*, assumes so many different forms that I was not surprised to learn that a microbiologist was to undertake research into what constituted a normal sporophore.

In nearly 20 years I have observed so many abnormalities of one sort or another that I now suggest we limit the characteristics of such diseases as Mummy and La France. Fortunately I have not yet been in intimate contact with the latter, so I shall confine this paper to Mummy Disease, of which I have some experience.

What are the diagnostic characteristics of Mummy Disease? **Kligman** (1), who originally suggested the name, describes them in this way:

1. The disease rarely becomes manifest before the third break.
2. The cap is dwarfed and tilted, and the stems are thinner and longer so that the normal proportion between stem and cap is altered.
3. Subsequently, the infected area enlarges and may progress by direct continuity all the way down the bed. This gradual and uninterrupted "march" down the bed is one of the most characteristic features of the disease, which is present in latent form about six feet beyond the margin of diseased areas.
4. Diseased mushrooms do not decay, but remain as dry, leathery "mummies" on the bed.
5. The gills tend to be hard and under-developed and occasionally contain drops of greenish slime between them.
6. Many of the mushrooms exhibit heavy coarse "roots."
7. Often the base of the stem is swollen and covered with a velvety white overgrowth of mushroom mycelium.
8. The external tissue is discoloured.
9. Longitudinal sections frequently reveal soft discoloured pits, streaks and channels in the tissue of the cap and stem.
10. Cultures from the water-soaked tissues almost always yield a bacterium, *Pseudomonas fluorescens*. The organism is evidently only a secondary invasion and is not the cause of the disease.
11. Infected areas do not recover. On subsequent breaks, most of the pinheads are arrested and stunted at an early stage.
12. The spawn in such areas appears to be entirely healthy.
13. The disease shows little tendency to spread from one bed to the next, although this occasionally happens.

**Tucker and Routien** (2) go even further:

14. Uneven growth of the stipe tissues often causes considerable curvature.
15. The cream strains are subject to a soft, wet type of rot resulting from secondary bacterial invasion.
16. The disease spreads through beds at the rate of about one foot per day.
17. The first affected sporophores are usually few in number and confined to a small area of the bed. The disease has not been observed appearing simultaneously over large areas. In the following break, the symptoms are more pronounced.



18. The tissues are firm at first, but become spongy and slightly more moist externally than normal; finally they become spongy, dry and tough.

19. When the stipe of an infected sporophore is cut across with a sharp knife there is a gritty sound and feel as if the stipe contains some granular material.

20. The colourless, translucent, water-soaked dots or streaks are most pronounced near the base of the stalk.

21. At the point of attachment to the rhizomorph ("root" or mycelial strand) there is usually some browning and development of a wet rot. (This is characteristic, regardless of the occurrence of bacteria-packed cavities in the stipe and pileus.)

22. The masses of rhizomorphs and soil which come out of the bed with diseased white sporophores are not characteristic of the cream varieties.

23. The tissues (of the stalk) are slightly spongy and dry and have undergone some shrinkage in the pulling of the central tissues of the stipe away from the more compact cortical region.

And in amplification of **Kligman's** point 8, **Tucker and Routien** state: "In the white mushroom varieties the entire sporophore is grey or light tan."

Twenty-three "characteristics" should be enough for anyone. I suggest they are too many. My own "short list" of characteristics by which Mummy Disease can be recognised with white strains is as follows:

1. The appearance, in a limited area, of mushrooms which look dead or dying.

2. The subsequent rapid spread of the disease, which can be at the rate of 5 ft. *per diem*.

3. The frequent but by no means universal tilting of the cap.

4. The occasional bending over of the top end of the stalk until the cap is at 90 degrees to the bed.

5. The presence of interior "pitting" revealed when the stalk is broken away from the cap.\*

6. The absence of any normal, saleable mushrooms in beds once attacked.

7. The apparent normality of the spawn beneath.

I have no doubt that, in subsequent flushes, because normal development is hindered (Tucker and Routien say "the transfer of water and nutrients into the young sporophores is apparently prevented by the disorganization of the conducting tissues"), we might find coarse "roots," long thin stalks, swollen stems covered with thick mycelial growth, discoloured mushrooms, bacterial slime, spongy tissue, etc. But these sad phenomena, I submit, are not confined to Mummy Disease.

Similarly, hard immature gills are by no means found invariably or exclusively in mushrooms affected by Mummy. Nor are loose tissues within the stalk.

\*This is preferable to cutting the mushroom longitudinally; it was suggested to me in conversation with Dr. J. W. Sinden.

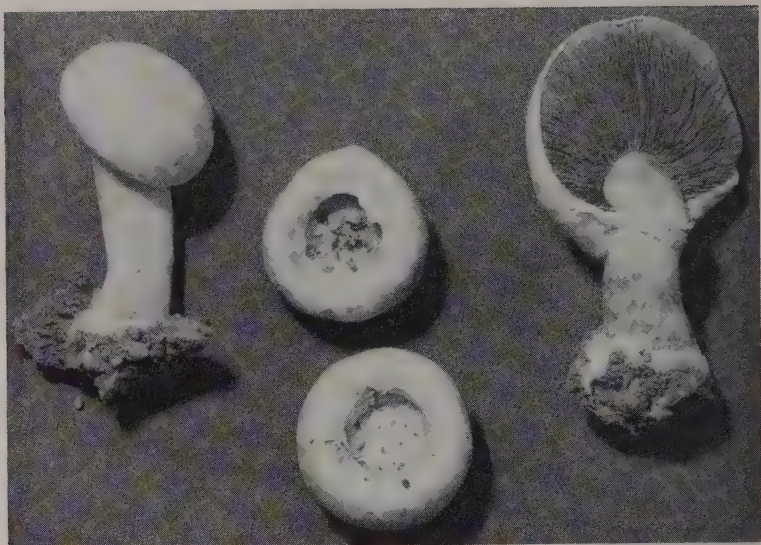


PHOTO BY MAYBONE STUDIOS

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More controversially, I suggest that all Mummy-affected mushrooms do not inevitably remain in a mummified state. Before the war the white mushrooms usually did, but the cream varieties did not; and the white strains we use to-day have been so developed that they may well be more susceptible to secondary bacterial breakdown. Indeed, I observed this wet rot in white mushrooms affected by Mummy in 1955.

The "gritty sound and feel" when a stalk is cut I have not often noticed. It may be there; and when it is, it is at best a confirmatory symptom.

The photograph reveals what I regard as the *essential* characteristics of Mummy Disease, and will, I hope, help growers to diagnose it with the promptitude essential if its spread is to be controlled.

Finally, since **Kligman** when he gave the name to this disease made no reference to browning and wet rotting of the base of the stalk, it is surprising that **Tucker and Routien** should regard this as truly characteristic whether or not **Kligman's** "discoloured pits, streaks or channels" can be found. And I have seen this browning-and-wet-rotting which was definitely not attributable to Mummy, for the beds recovered and cropped well.

#### References:

1. KLIGMAN, A. M.: *Handbook of Mushroom Culture*, 1950.
2. TUCKER, C. M., and J. B. ROUTIEN: *The Mummy Disease of the Cultivated Mushroom*. University of Missouri Research Bulletin 358. December, 1942.



# WAGES INCREASE

Following a meeting of the Agricultural Wages Board for England and Wales in London, an increase of 8/- per week in the basic farm wage came into operation from 23rd January, lifting the new minimum for men from £6 7s. 0d. to £6 15s. 0d. per week. The workers representatives had asked that the minimum should be raised to £7. There is no doubt that the workers' representatives were disappointed at failing to achieve the £7 minimum and a further claim, to bring the minimum to this figure, was submitted on the 1st of this month.

With the minimum rate at the moment standing at £6 15s. 0d., the rate scale appears below.

## MALES

Age	Weekly	Hourly	Overtime	Holiday Pay	
				Weekdays	Sundays
	s.	s. d.	s. d.	s. d.	s. d.
20	135	2 11	4 4	22 6	17 4
19—20	108	2 4	3 5	18 0	13 8
18—19	98	2 1	3 2	16 4	12 8
17—18	85	1 10	2 9	14 2	11 0
16—17	72	1 7	2 4	12 0	9 4
15—16	63	1 5	2 0	10 6	8 0

## FEMALES

Age	Weekly	Hourly	Overtime	Holiday Pay	
				Weekdays	Sundays
	s.	s. d.	s. d.	s. d.	s. d.
21	102	2 2	3 3	17 0	13 0
18—21	96	2 1	3 1	16 0	12 4
17—18	80	1 9	2 7	13 4	10 4
16—17	69	1 6	2 2	11 6	8 8
15—16	55	1 2	1 9	9 2	7 0

### Females on 44 hour week (Cambridge and Yorkshire)

Age	Weekly	Hourly	Overtime	Holiday Pay	
				Weekdays	Sundays
	s.	s. d.	s. d.	s. d.	s. d.
21	95	2 2	3 3	15 10	13 0
18—21	90	2 1	3 1	15 0	12 4
17—18	75	1 9	2 7	12 6	10 4
16—17	65	1 6	2 2	10 10	8 8
15—16	51	1 2	1 9	8 6	7 0

## PINHEADS

48. Quote from *Coventry Telegraph*, 9th Dec., 1955. "At the Brandywine canning factory, one of the largest packers of fancy mushrooms in the world, 10,000 mushrooms are decapped, and their stems cut, every minute." It looks like pretty good going to me, but if they de-cap them and de-stem them what on earth are the "fancy" bits they put in the cans?

49. When I asked why my supply stable had run short of manure they told me there had been a big demand for it from the Rotherham foundries. Of course he was pulling my leg. But no! Apparently stable manure is mixed with sand to make moulds for castings. (Or am I still being fooled?)

50. For use in mixing and handling peat we find aluminium shovels admirable; very light in weight, always clean and smooth, and of course non-rusting. They may be expensive, especially as they tend to wear pretty quickly at the leading edge, but at least they don't wear out the men using them.

51. F.C.A.'s fulsome encomiums on p. 22 of Bull. 73 leave me breathless. Surely his pen was wandering. He must know there is no pretence. He must know that I have had *too much* patience with scientists for too long. As one given to growing by hunches, by the unreasonableness of experience without confirmation, by intuition without proof, I should have rounded on the class years ago. (The time comes, of course, when one *must* speak or for ever lose one's self-respect.) He must know that, while I'm nearly ready to turn my tray houses back to shelves (one must live, you know!) the real reason is that I am not clever enough to get the 2 lb. crops that every conversion-trapped tray grower claims. And what's this about Windmills? The only windmills I know are those La France-like structures on the Norfolk Broads, and my only

connection with one may have been on some occasion when I put a cruiser to its maximum of 8 m.p.h. and inadvertently struck it in an uncontrollable attempt to overtake a tacking yacht. F.C.A. does, however, remind me to polish up my hobbies, particularly argumentation. I thank him for that. But Windmills! Dear me! What has F.C.A. in mind?



"Uncontrolled attack on La France-like structure."



52. After a third flush in a house where nearly all mushrooms were attacked by Cecids, we placed some newspapers over a section of about 20 sq. ft. At the fourth flush the attack was as bad as ever *except under the paper*, where nearly every mushroom was clean. On the top of the paper, however, were millions of *small* Cecids in the same sort of seething masses reported in Pinhead 24. I suspect that the Cecids that evacuated the area under the newspaper had sighted an article headed "BRITISH MUSHROOM SCIENTISTS PLAN ALL-OUT ATTACK ON THE CECID: EARLY ANNOUNCEMENT OF 100% CONTROL MEASURES."<sup>\*</sup>

53. The automatic control which failed and collapsed our small steam boiler recently (Pinhead 46) has let us down again. In spite of thorough inspection and careful servicing of the Drayton Float gear, the same switch failed to operate and a *loaned* boiler is ruined! So once again we are without supplementary heat for peak heating, spawn running, etc. Until our new Cochran is ready we must rely on adjusting our composting so that no peak heating is necessary—a tricky but not impossible job.

54. "In my view," said I, to the manager of a chain of restaurants in a Northern city, "the quicker mushrooms are cooked and served the better they taste." The expression of pity on his face was worth seeing. "Nonsense," he replied; "I should know what to do with mushrooms, after all I handle hundreds of pounds a week. We always cook them well in advance and allow them to simmer for at least 10 hours. That's the way to bring out the flavour." "Away with you," I interjected, "10 minutes is the utter limit unless you want to lose the flavour." This man, who appeared to know more about mushroom growing than I, went on, "You fellows do everything in tens. You compost for 10 days, peak heat for 10 days, case after 10 days, pick 10 days later, crop for 10 weeks and then leave the house empty for 10 days. And now you think mushrooms ought to be cooked for 10 minutes." "Or was it 10 hours?" I asked.

55. Further to Pinhead 51, if there were a drop of pundital enthusiasm anywhere on the subject of Cecids perhaps the following might stir it up. We have 17 shelf houses, all of which have had four completed crops since December, 1954. No 1. has been free of Cecids in all four rounds. Nos. 10, 11, 12, and 13 had Cecids in the first round but none in the following three. In the first round all but two of the remainder were free, but in the second round fewer were free and by the third all except the five mentioned were infested. This all-in attack was the same in the fourth round (except of course for those five). Now these houses—1, 10, 11, 12, and 13 have been filled and cropped in that order every time. The first question is, therefore, how have these five consecutive houses avoided Cecids for three rounds—after an initial attack in four of them—while all other houses have been attacked repeatedly? If Cecids could gradually creep into so many houses why didn't they creep into these five? Question 2. We have long thought and argued that there is a carry over from crop to crop. Why then were Cecids not carried over in five houses from the first attack, when they were invariably carried over in all the other houses? A 3rd question. Why did Cecids disappear



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after the first round from four houses, while they continued in all rounds in the other two houses which had them at the first round? One of these "other two" was filled just before No. 1 in the consecutive group—1, 10, 11, 12, 13—and the other was filled after No. 13. (Is that clear? Of six crops initially attacked four lost their Cecids in the second round but the other two had them all through; house No. 1, not having any at any time.) Now why should four out of six lose Cecids? I think it must be important that the five houses repeatedly mentioned were emptied and filled in sequence. I can only suppose that after the first attack those houses had some unusual treatment while they were empty that has "stuck" for a whole year and repelled all flying and crawling Cecids. It seems fantastic that any insecticide could last so long, especially as live steam is used freely at peak heat. But what other possibility is there? It is equally fantastic that, check as carefully as we will, we have no record or memory of any change in our clean-up arrangements for several years. Yet something **MUST** have happened to those houses after that first attack. It just can't be coincidence. Somewhere in all this is the complete answer to the Cecid problem, particularly as there's no evidence of crop reduction resulting from whatever Cecid repellent was there.



"TIME"—and MOTION

56. I hear of a very well-known grower who is having an intensive Time and Motion Study done on his farm. I gather the staff have asked for the Study to be limited to working hours.

57. Our White Plaster Mould house (Pinhead 40) has finished up at 2.3 in 6 weeks; it was emptied because of Cecid and Bacterial pit. On emptying we observed a very full growth of mycelium right down to the bottom of the compost on the concrete beds. The only sign of W.P.M. was at the sideboards, and very little at that. The clever know-all who told us to turn it out six weeks ago ought to be placed in the middle of our next White Plaster compost, filled, and duly peak heated. After a decent sweating out he would be "cured."

58. I understand Research at Littlehampton is to be "fundamental" rather than experimental. Am I too cynical when I suggest that we may therefore expect no results of practical value for at least 10 years?

*(Continued on page 59.)*



## MGA INCOME AND EXPENDITURE ACCOUNT FOR

	£	s. d.	£	s. d.
Salaries and Clerical Assistance .. .. .	1,310	7 4		
Less: Publicity Administration .. .. .	233	6 8		
			1,077	0 8
Office Rent .. .. .			151	16 2
Postages, Printing and Stationery .. .. .			293	19 5
Telephone and Telegrams .. .. .			82	18 10
Travelling, Hotel and Entertainment Expenses .. .. .			170	17 11
Expenses of Exhibition and Cost of Luncheon (Annual General Meeting) at Tunbridge Wells .. .. .	659	9 11		
Less: Sale of Tickets, Stand Rents, Donations, etc.	626	4 4		
			33	5 7
Expenses of Exhibition and Cost of Luncheon (Annual General Meeting) at Brighton .. .. .	1,034	3 3		
Less: Sale of Tickets, Stand Rents, Donations, etc.	926	16 6		
			107	6 9
Cost of Executive Committee Meetings .. .. .			42	2 6
Subscriptions to Trade Journals, etc. .. .. .			20	10 0
Bank Charges and Cheque Book .. .. .			5	10 0
Audit Fees and Accountancy .. .. .			40	19 0
General Expenses .. .. .			22	13 3
Bad Debts written off.. .. .			2	18 0
Depreciation .. .. .			20	9 6
Removal Expenses .. .. .			15	15 0
			2,088	2 7
Balance being Excess of Income over Expenditure ..			127	0 8
			<u>£2,215</u>	<u>3 3</u>

## PUBLICITY

	£	s. d.
Printing, etc. .. .. .	947	15 3
Administration Expenses .. .. .	233	6 8
Brighton Exhibition Publicity .. .. .	16	7 11
Advertising .. .. .	38	10 0
	1,235	19 10
Balance carried forward .. .. .	337	15 5
	<u>£1,573</u>	<u>15 3</u>

## BALANCE SHEET A

LIABILITIES		£	s. d.	£	s. d.
SUNDRY CREDITORS:					
General .. .. .		905	19 10		
Publicity .. .. .		409	13 11		
Estimated Subscriptions received in advance ..		200	0 0		
Estimated N.F.U. Contribution .. .. .		150	0 0		
				1,665	13 9
PUBLICITY FUND:					
Balance as per Income and Expenditure Account				337	15 5
INCOME AND EXPENDITURE ACCOUNT:					
Balance brought forward—1st September, 1954 ..		739	4 6		
Add: Surplus for the period .. .. .		127	0 8		
		866	5 2		
Less: Loss on Sale of Office.. .. .		180	1 4		
				686	3 10
				<u>£2,689</u>	<u>13 0</u>

We hereby certify that the above Balance Sheet has been correctly drawn up in  
110 CANNON STREET, LONDON, E.C.4.

19th

## FOURTEEN MONTHS ENDED 31st OCTOBER, 1955

	£	s.	d.	£	s.	d.
Subscriptions from Ordinary Members ..				1,419	2	0
<i>Less:</i> Estimated contribution due to N.F.U.	150	0	0			
<i>Less:</i> Excess reserve 1954 .. ..	32	4	0			
				117	16	0
				1,301	6	0
Subscriptions from Honorary Members ..				489	3	4
Sale of Advertising Space in Bulletin, Sale of Bulletin and Literature .. ..				2,376	19	0
<i>Add:</i> Stock of Saleable Literature 31st October, 1955 .. .. .				100	0	0
				2,476	19	0
<i>Less:</i> Stock of Saleable Literature 1st Septem- ber, 1954 .. .. .	120	0	0			
Cost of Bulletins and Literature ..	2,000	5	5	2,120	5	5
				356	13	7
Sundry Donations and Receipts .. ..				68	0	4
				£2,215	3	3

## ACCOUNT

						£	s.	d.
Receipts for the Fourteen months	..	..	..	..	..	1,573	15	3

st OCTOBER, 1955						ASSETS			£	s.	d.	£	s.	d.
CASH IN HANDS OF SECRETARY .. .. .												4	7	3
CASH AT NATIONAL PROVINCIAL BANK LTD.: General Account .. .. .							332	1	4					
Publicity Account .. .. .							923	6	6			1,255	7	10
SUNDRY DEBTORS .. .. .							1,190	14	9					
<i>Less:</i> Reserve for Doubtful Debts .. .. .							50	0	0			1,140	14	9
STOCK OF SALEABLE LITERATURE (as valued by Secretary)												100	0	0
LIBRARY BOOKS—Balance as at 1st September, 1954 ..												4	3	2
OFFICE EQUIPMENT—Balance as at 1st September, 1954							205	9	6					
<i>Less:</i> Depreciation .. .. .							20	9	6			185	0	0
NEW OFFICE—Balance as at 1st September, 1954 ..							230	1	4					
<i>Less:</i> Sale Proceeds .. .. .							50	0	0					
							180	1	4					
<i>Less:</i> Balance transferred to Income and Expenditure Account .. .. .							180	1	4			-	-	-
												£2,689	13	0

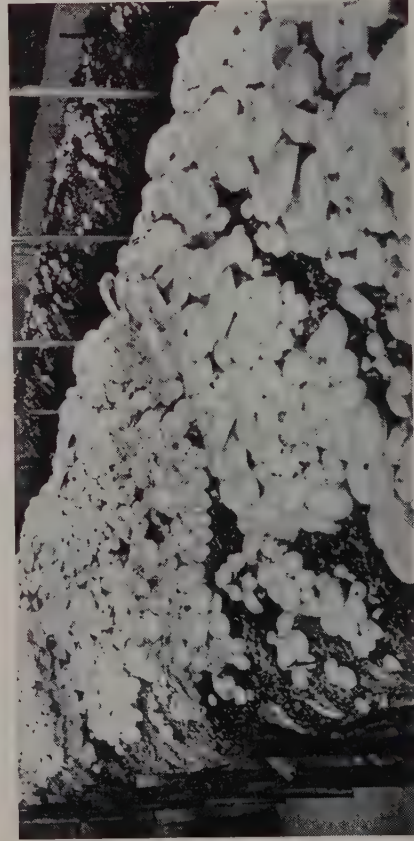
ce with the books, records, vouchers, information and explanations given to us.  
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*I have been thinking . . .*

## **ABOUT FLUSHES**

By R. L. EDWARDS

To me the question, "Why do mushrooms grow in flushes?" is second only in interest to "Why do they grow at all?" This admission may have biased my reaction to some recent correspondence in *The Grower*.

About a month ago an anonymous and rather ill-informed note said that the peak of flushes comes at about the same time all over the country, and if for reasons such as high or low temperature a flush is missed the next one grows at the normal interval after the date of the missed flush. Fred. C. Atkins wrote a letter disagreeing with these statements, with the surprising comment that he "doubts if any mushroom grower would regard research into the flush phenomenon as of more than academic interest." He may have correctly described growers' views, which he appears to share, but much as I respect his opinions, this time I think he is wrong, or at least is taking a very short term view.

As for being only of academic interest, this phrase is almost a certificate of future practical importance. When I was a student, the structure of the atom was the subject of purely academic study, without any apparent prospect whatever of having any practical application; now it is the foundation of an industry and the coming source of world power. The behaviour of fatty films on water was also being studied in the Universities; now it is the basis of the detergent industry, which has already been established for many years. DDT was first made as a laboratory exercise. There are many other similar examples, and I think the only reasonable excuse for lack of interest in such "academic" research is the time lag which may occur before it produces results which are usable in commercial practice: this may be Mr. Atkins' point of view.

After all, mushrooms do grow in flushes, and we recognise their importance by thinking and talking about our yields in flushes, particularly the first and second.

There are two attractive possibilities: extending the period of growth of pinheads before the flush ends, and reducing the interval between flushes; there is some evidence to show that one or both of these may be possible.

In commercial growing most beds produce well defined flushes, at average intervals of ten days. There may be a difference of one or more days between different shelves in the same house, and even between the two ends of a shelf, the simplest and likeliest explanation being uneven temperature distribution during the spawn growing and early fruiting stages. We commonly found such differences at the Research Station,

and they varied with the time of year. Occasionally we also found that beds would crop continuously with no semblance of a flush for two weeks, giving some mushrooms nearly every day, and producing the same yield in a month as a neighbouring bed which cropped in flushes lasting only two or three days.

In general I have found both at Yaxley and more recently on my own farm that the very sharply defined flushes lasting only one or two days tend to produce rather small mushrooms, though there may be so many of them that there is a good yield. Good quality mushrooms tend to reach picking size over a period of several days.

Although flushes do not necessarily coincide in all the houses on a farm, or even on all the shelves in a house, they are sometimes thrown together by a sudden change in conditions. This usually happens if the weather suddenly changes; particularly a sudden change from rather cold to warm humid weather is apt to bring houses into flush together, though they may previously have been flushing at intervals of several days. On the other hand I know one grower who uses a well controlled heating system to separate the flushes of several houses if they tend to come together. He prefers regular production day by day to a succession of alternating rushes and slumps, and he warms or cools a house to advance or delay a flush, thus successfully smoothing out his daily output. I should add that this is a process requiring good control of the heating system and also considerable skill as a grower. Reckless variation of temperature may have peculiar effects.

The suggestion quoted earlier, that if a flush is delayed the next one develops at the normal ten day interval after the missed date, is sheer nonsense. Apart from the examples of time variations already quoted, I quite successfully delayed a flush for about five days by cooling the house, to avoid the Christmas week-end, and it did not revert to the previous sequence of flushes. If anything the flushes on various shelves became more spread out.

Perhaps when Mr. Palfrey has cleared up Lb. per sq. ft. and cecids, he will look into the flush phenomenon with the help of some of the daily picking records which must be available?

---

## **MGA ADJOURNED ANNUAL MEETING**

Mr. G. W. Baker (Chairman) presided at the adjourned annual meeting of the MGA which took place at 45 Bedford Square, W.C.1, on Thursday, 26th January. The accounts, showing an excess of income over expenditure of £127 for the 14 months ended 31st October, 1955, were adopted. These accounts appear on pages 52 and 53 of this issue.

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## ***CORRESPONDENCE***

Mr. Michaels in his "American Growers' Diary" mentions a possible relationship between mushrooms and cancer control.

It recalled a thought which passed through my mind several years ago, which I mention with some diffidence, as I know nothing about cancer research. Nevertheless, here it is for what it is worth.

I was seeing the first really bad attack of rosecomb and trying to fathom the revolting shapes caused, it seems, by mineral oils which in some way upset the cellular growth of the mushrooms. Is not this what happens in the human body and is not mineral oil a suspected cause?

Maybe there is something here for the research worker to look into.

D. N. DALTON.

---

..... seems an excellent moment to write and say how very grateful a beginner like myself is for the truly enormous and inestimable help the MGA Bulletins and related publications have given me. My sincere thanks to you and the members of the Editorial Board and wishing you all good health and prosperity in 1956.

F. G. FIGGIS.

Correspondence on any aspect of the mushroom industry is warmly welcomed.  
Editor.



## ***FOR YOUR DIARY***

### **COMING EVENTS**

Saturday, 3rd March: Farm Walk, Burscough Bridge, Lancs., by kind permission of Messrs. James Martland Ltd.

Saturday, 14th April: Farm Walk, Cranleigh, Surrey, by kind permission of Messrs. John Ady & Co. Ltd.

Thursday, 14th June to 23rd June: International Conference, Paris.

Wednesday, 11th July: Farm Walk, Thakeham, Sussex, by kind permission of Messrs. A. G. Linfield Ltd.

Saturday, 22nd September: Farm Walk, Oxted, Surrey, by kind permission of Messrs. Broadham Produce Co., Ltd.

14th—15th November: Mushroom Industry Exhibition, Eastbourne.

Unless notified otherwise all Farm Walks will commence at 2.30 p.m. Members in Lancashire, Yorkshire and Cheshire will receive a special invitation to the Burscough Bridge Walk, but those outside this area who hope to attend should notify the Secretary.

## STANLEY MIDDLEBROOK'S PINHEADS

(Continued from page 51.)

If that fear is anywhere near the truth it would be a good move to get some purely practical experimental work started at some of the Government Field Stations. But even then another cloud of fear wracks the frustrated scene: if anything at all is done along these lines it will almost certainly be wangled for the South by Southerners, and we in the North will be left out of the picture as usual. Yet we have at least two excellent Stations up here where such work could be done, and I'd take anybody a level bet that it would be done better in the North and produce quicker results.

59. After a long period of first flushes giving only .4 and .5 per sq. ft. we suddenly have three in a row doing well over 1 lb. Indeed one of them has just done 2 lb. in 15 days? Of course you're not going to believe that. "It can't be done; S.M.'s swanking, not to mention lying." O.K., then be good enough to disbelieve this too: a crop now in its 8th week of picking has done just over 0.9 and is, I think, (don't laugh!) petering out.

60. Our visiting cold-room service man tells me mushroom growing is a complicated and tedious process, as he knows from his own uncle's experience. This enthusiastic relative, learning from the purveyor of an advertised spawn that he would first need a compost of chopped straw, bought a bale and sat up two days and two nights cutting it into small pieces with a pair of scissors:

---

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# **MGA MEMBERS BACK NEW PUBLICITY FINANCE DRIVE**

The drive for increased publicity subscriptions per carton of spawn, launched in January by the newly formed MGA Publicity Finance Committee under the chairmanship of Mr. F. L. Filmer, has met with a most heartening response from Grower Members. Support was still coming in at the time of going to Press. Herewith is a list of those members who have agreed to contribute 2d. on each carton of spawn purchased.

Commenting on the scheme and the excellent response, Mr. G. W. Baker, MGA chairman, said: "In the absence of a compulsory contributory scheme the present one is the best that can be done for the time being. The larger growers contribute the most and the smaller ones in proportion to their output. Even catch-crop growers get a fair crack of the whip and all of us are hoping for a really high per centage of support by the time the next Bulletin is published."

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(See also page 63.)

# **THE MGA COMPETITIONS AT BRIGHTON, 1955**

By JOHN GOAMAN

The mushroom growing industry is an example to all who believe in private enterprise. By individual effort good fellowship and co-operative research fostered by growers and suppliers, the mysteries underlying, and the techniques necessary to successful commercial production have been mastered to a notable extent. For reasons, such as the lack of an exact knowledge about, and the power exactly to reproduce commercially, the medium and conditions ideally suited to the crop, perfection in production cannot be guaranteed. This fact serves to emphasize the genius and art that achieves high standards of quality and which are reached sufficiently often for them to be regarded as a characteristic of the industry. A perfect product is in fact frequently grown, as these competitions showed. But high standards in production cannot by themselves ensure ideal commercial packs. This is the uppermost thought following the delightful experience, and honour, shared with Mrs. Frances Perry, of judging the MGA Competitions at Brighton.

Among the exhibits were some that could hardly be bettered and certainly all the first prize winners can expect to be "in the money" if their present standards are maintained. A number of potential prize winners ran themselves out of the competition through causes that could be remedied easily and reflect not on their ability to grow good mushrooms but on their attention to details in preparation, packing and presentation.

Some competitors were down pointed because of the appearance of their packs, lining papers being untidy and the mushrooms carelessly placed. The advantages of a neat and distinctive pack and careful placing are several, neatness and distinction leap to the buyer's eye, the out-turn in quality and weight can be more readily assessed in the case of systematic packs than in the case of random packs, thereby saving the buyers time and increasing his confidence.

The trimming of stalks to a uniform length, making a single cut at right angles to the stalk and using a really sharp knife serves to improve the appearance, obviates bruising and splitting and facilitates orderly packing. Bruised or split stalks show signs of staleness more markedly and provide secure lodgment for casing and other dirt.

The underfilling of packages (as distinct from underweight) is bad on two counts, the contents are more likely to be bruised in transit and handling, while buyers may be unduly influenced by a pack that *looks* under-weight. Some packages were over-filled and showed packing damage as a consequence.

No mushrooms in the Show were outside the size limits laid down in the Schedule but marks were lost by some competitors because of marked lack of uniformity in size. The close size grading of mushrooms has advantages but how far it should go is arguable. Close size grading

facilitates packing, it is desired by buyers for some sections of the catering trade, but too close size grading may make it difficult for retailers to weigh out the popular  $\frac{1}{4}$  lb.

Mushrooms of regular outline look much more attractive than those that show flattening at the sides and the former are essential in close and keen competition.

The range of colour in the Show was quite narrow, highest marks were given to those that were either truly white or were a warm shade of off-white. The colder shades of off-white were not considered so attractive. In the class for "opens" the colour of the gills was taken into account, the preference being given where these were, uniformly, a fresh pink.

While in the market appropriate prices will be made for samples that are intermediate between the strict definition of "buttons," "caps" or "opens," in a competition the preference must always go to exhibits that exactly fit the description. Several competitors failed to secure the top marks because the membranes of their "buttons" were thinning or an occasional break was showing, also "buttons" were found in a few exhibits of "cups," in a very few cases mature "cups" were found among "opens."

In no case was disease or insect attack noted on the mushrooms, the principal reasons for a loss of marks for condition and defect being bruising or discolouration from mechanical damage (such as rough handling) and soiling through casing or other dirt.

In connection with Class 7 (As packed for market) it was noted that while all the covers were firmly secured, the ease or safety of their removal varied. In the market, covers are often removed for inspection of the pack. We must accept the fact that in the hurly-burly of the market damage will occur if the covers are at all difficult to remove.

It will be seen from the above remarks that most of the causes that led to a loss of marks can be attributed to the neglect of details in harvesting, handling, grading, packing or presentation. A strict attention to detail is essential to winning prizes and it is also the soundest basis on which to build a high market reputation.

---

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*(Continued from page 61.)*

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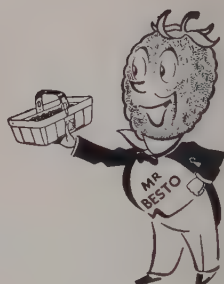
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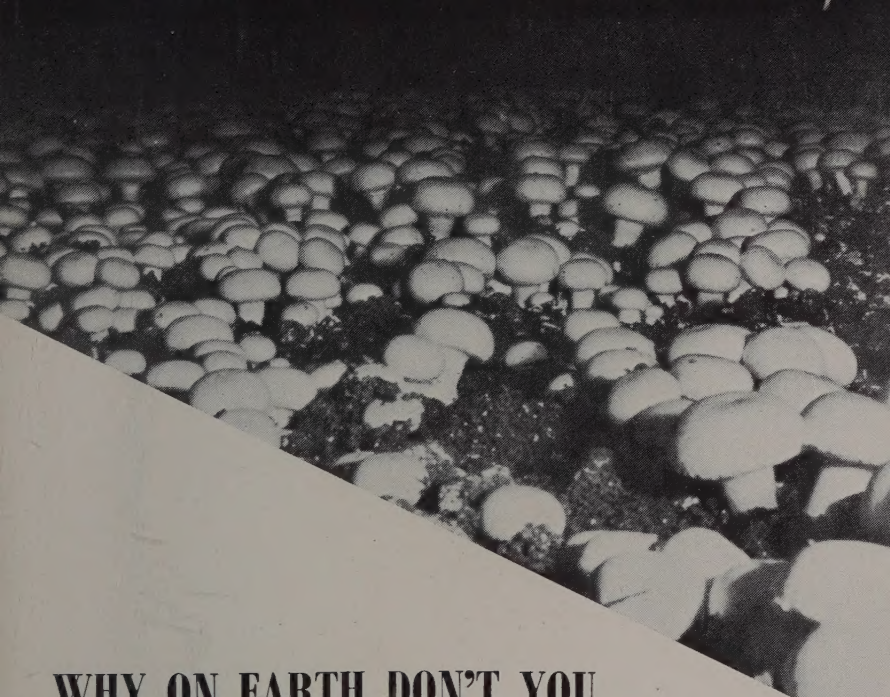
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